

Amendments to the Claims

1 Claim 1 (currently amended): A computer-implemented method of provisioning ~~one or more~~
2 ~~software resources of an aggregated service in a computing network, comprising steps of:~~
3 ~~defining a provisioning interface of the aggregated service;~~
4 ~~specifying the provisioning interface in a service description document;~~
5 obtaining credentials of a user ~~[[of]]~~ who requests to access an ~~[[the]]~~ aggregated
6 service~~[[,]]~~ according to the service description document;
7 locating, in a network-accessible registry, a service description document specifying a
8 provisioning interface for the aggregated service, the aggregated service comprising an
9 aggregation of a plurality of sub-services and the provisioning interface specifying how to invoke
10 identity functions of the aggregated service;
11 analyzing the obtained credentials by invoking one or more of the identity functions,
12 according to the specification thereof in the provisioning interface, to determine whether the user
13 is authenticated for, and/or is authorized for, accessing the aggregated service; and
14 allowing the user to ~~perform access~~ the aggregated service only if indicated by the
15 analyzing step has a successful result.

1 Claim 2 (currently amended): The computer-implemented method according to Claim 1,
2 wherein an implementation of each of the identify functions of the aggregated service is provided
3 by at least one of the sub-services. further comprises the step of: registering the service
4 description document in a registry.

1 Claim 3 (currently amended): The computer-implemented method according to Claim [[2]] 1,
2 wherein:

3 at least one of the sub-services has a local provisioning interface, the local provisioning
4 interface specified in a corresponding service description document and comprising a
5 specification of how to invoke one or more identity functions of the sub-service; and

6 the identity functions in the provisioning interface of the aggregated service are selected
7 from the local provisioning interfaces; and further comprising the [[steps]] step of:

8 controlling access to each of the sub-services having the local provisioning interface,
9 further comprising the steps of:

10 determining whether the user is authenticated for, and/or authorized for, accessing
11 the sub-service by invoking at least one of the one or more identity functions of the sub-service,
12 according to the specification thereof in the local provisioning interface; and

13 allowing the user to access the sub-service only if the determining step has a
14 successful result.

15 ~~— defining a provisioning interface of at least one of the one or more software resources of~~
16 ~~the aggregated service; and~~

17 ~~— for each of the at least one software resource, specifying the provisioning interface of a~~
18 ~~service performed by the software resource in the service description document or in one or more~~
19 ~~other service description documents.~~

1 Claim 4 (currently amended): The computer-implemented method according to Claim 3,
2 wherein:

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3 the step of obtaining credentials of the user of the ~~aggregated service~~ also obtains sub-
4 service credentials for at least one of the sub-services having the local provisioning interface; and
5 the determining step uses the obtained sub-service credentials, the at least one software
6 resource, according to the service description document or the one or more other service
7 description documents; and
8 ~~— further comprising the step of allowing the user to perform selected services represented~~
9 ~~by the provisioning interfaces of the at least one software resource, if indicated by the analyzing~~
10 ~~step;~~

1 Claim 5 (currently amended): The computer-implemented method according to Claim [[4]] 1,
2 wherein:

3 one or more operations of at least one of the sub-services is access-protected;

4 further comprising the step of obtaining step further comprises obtaining, for at least one
5 of the access-protected operations, operation-specific credentials of the user[[,]]; and further
6 comprising the step of:

7 controlling access to each of at least one of the access-protected operations, further
8 comprising the steps of:

9 and wherein the step analyzing the obtained operation-specific credentials by invoking
10 one of more of the identity functions, according to the specification thereof in the provisioning
11 interface, to determine whether the user can access the access-protected operation; and

12 [[of]] allowing the user to access the access-protected operation only if the step of
13 analyzing the obtained operation-specific credentials has a successful result, perform selected

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14 ~~services depends on the operation-specific credentials of the selected service.~~

Claim 6 (canceled)

1 Claim 7 (currently amended): The computer-implemented method according to Claim 1,
2 wherein identity information obtained by invoking one or more of the identity functions is
3 programmatically relayed among at least two of the sub-services ~~distributed services performed~~
4 ~~by the software resources~~ of the aggregated service.

1 Claim 8 (currently amended): The computer-implemented method according to Claim 7,
2 wherein the programmatic relaying comprises sending a message which specifies the ~~credentials~~
3 identity information in a header of the message and which specifies a service request in a body of
4 the message.

1 Claim 9 (currently amended): The computer-implemented method according to Claim 8,
2 wherein the message is a SOAP ("Simple Object Access Protocol") message.

1 Claim 10 (currently amended): The computer-implemented method according to Claim 1,
2 wherein the service description document is specified in a markup language.

1 Claim 11 (currently amended): The computer-implemented method according to Claim 10,
2 wherein the markup language is Web Services Description Language ("WSDL").

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1 Claim 12 (currently amended): The computer-implemented method according to Claim 2,
2 wherein the network-accessible registry is a ~~network-accessible~~ registry accessed using
3 standardized messages.

1 Claim 13 (currently amended): A system for provisioning ~~one or more software resources of an~~
2 aggregated service in a computing network, comprising:

3 means for defining a provisioning interface of the aggregated service;

4 means for specifying the provisioning interface in a service description document;

5 means for obtaining credentials of a user ~~[[of]]~~ who requests to access an ~~[[the]]~~

6 aggregated service, ~~according to the service description document;~~

7 means for locating, in a network-accessible registry, a service description document

8 specifying a provisioning interface for the aggregated service, the aggregated service comprising

9 an aggregation of a plurality of sub-services and the provisioning interface specifying how to

10 invoke identity functions of the aggregated service;

11 means for analyzing the obtained credentials by invoking one or more of the identity

12 functions, according to the specification thereof in the provisioning interface, to determine

13 whether the user is authenticated for, and/or is authorized for, accessing the aggregated service;

14 and

15 means for allowing the user to perform access the aggregated service only if indicated by

16 the means for analyzing has a successful result.

1 Claim 14 (currently amended): A computer program product for provisioning ~~one or more~~
2 ~~software resources of an~~ aggregated service in a computing network, the computer program
3 product embodied on one or more computer-readable media and comprising:

4 ~~computer-readable program code means for defining a provisioning interface of the~~
5 ~~aggregated service;~~

6 ~~computer-readable program code means for specifying the provisioning interface in a~~
7 ~~service description document;~~

8 computer-readable program code means for obtaining credentials of a user ~~[[of]]~~ who
9 requests to access an ~~[[the]]~~ aggregated service, according to the service description document;

10 computer-readable program code means for locating, in a network-accessible registry, a
11 service description document specifying a provisioning interface for the aggregated service, the
12 aggregated service comprising an aggregation of a plurality of sub-services and the provisioning
13 interface specifying how to invoke identity functions of the aggregated service;

14 computer-readable program code means for analyzing the obtained credentials ~~by~~
15 invoking one or more of the identity functions, according to the specification thereof in the
16 provisioning interface, to determine whether the user is authenticated for, and/or is authorized
17 for, accessing the aggregated service; and

18 computer-readable program code means for allowing the user to ~~perform~~ access the
19 aggregated service only if indicated by the computer-readable program code means for analyzing
20 has a successful result.

1 Claim 15 (new): The method according to Claim 1, wherein an implementation of at least one of

2 the sub-services is located dynamically, at run-time.

1 Claim 16 (new): The method according to Claim 7, wherein the identity information is initially
2 obtained as a result of the analyzing step.

1 Claim 17 (new): The method according to Claim 7, wherein the identity information comprises
2 an authentication token generated by one of the invoked identity functions.

1 Claim 18 (new): The method according to Claim 1, wherein:
2 at least two of the sub-services each have associated therewith an identity system for
3 access control thereto;
4 at least two of the associated identity systems are heterogeneous; and
5 at least one selected one of the identity functions of the aggregated service enables
6 dynamically joining at least two of the heterogeneous identity systems.

1 Claim 19 (new): The method according to Claim 18, wherein the at least one selected identity
2 function, upon invocation, identifies the identity system that stores information pertaining to
3 users of the sub-service with which that identity system is associated.

1 Claim 20 (new): The method according to Claim 19, wherein the dynamic joining is enabled by
2 relaying the identification of the identity system among the dynamically-joined identity systems.